

levels while increasing their academic grades in difficult classes (e. g., mathematics and sciences) compared to a control condition.

Understanding better individual differences in stress mindsets, their psychological and physiological implications, and the contexts in which stress mindsets interventions are best helpful will contribute to extending the research on stress. Most of all, this symposium also aims to create a place for collective reflections and discussions about the negative angle we chose and promote while studying stress and its potential repercussions for the lay public.

<https://doi.org/10.1016/j.psyneuen.2023.106686>

Stress Optimization in a Naturalistic Setting: The Protective Effects of the Synergistic Mindsets Intervention

Karishma Singh¹, Jeremy P. Jamieson¹, Christopher J. Bryan², David S. Yeager²

¹ University of Rochester

² The University of Texas at Austin

The synergistic mindsets intervention integrates growth mindsets (the idea that intelligence can be developed) and stress-can-be-enhancing mindsets (the idea that physiological stress response can fuel optimal performance) to optimize stress responses. To examine indicators of repeated unhealthy responses to stress over time and protective effects of the synergistic mindsets intervention, a double-blind field experiment combining daily diary and daily hormone sampling methods was conducted with youth from minoritized and low-income backgrounds ($N = 118$ individuals, $n = 1,213$ observations). Results from Bayesian statistical analyses showed that the synergistic mindsets intervention reduced daily negative self-regard, global cortisol levels (combined across three daily samples), and improved academic achievement. Overall, the intervention provided enduring protection of adolescents' mental and physical health during periods of high stress as well as help adolescents take fuller advantage of stressful but valuable opportunities for learning and skill development.

<https://doi.org/10.1016/j.psyneuen.2023.106687>

Gender and age differences in stress mindsets, a descriptive study from a large Canadian sample

Audrey-Ann Journault, Annabelle Naud, Sonia Lupien

University of Montreal, Canada

Believing that stress-is-debilitating for performance, health and mental health has been associated with adverse outcomes in these domains. As this negative stress mindset is malleable, identifying subgroups of the population who would benefit the most from interventions is important. This exploratory study aimed to explore whether there exist differences in stress mindsets according to gender and age in a large Canadian sample. A total of 1472 participants from three different age groups were asked to report how harmful stress was for their performance, health, and mental health. The sample was composed of 734 early adolescents ($N = 422$, age = 11-12 years, 57% girls) and middle adolescents ($N = 312$, age = 15-16 years, 62% girls), as well as their respective parents ($N = 738$, Mage = 44.6 years, 64.5% girls). The results showed a significant interaction between gender and age ($F(2,1139) = 6.07$, $p = 0.002$, $\eta^2 = 0.01$). Stress mindsets differed between

males and females, but only among middle adolescents. In this age group, females' stress mindsets were significantly more negative than those of males. In addition, for both genders, adults' stress mindsets were significantly more negative than those of middle and early adolescents. While these results will be to be confirmed by future longitudinal studies, they provide interesting insight into the subgroups of the population that could benefit the most from interventions, as they suggest that gender influences stress mindsets only in middle adolescence, whereas individuals tend to have more negative mindsets about stress with age.

<https://doi.org/10.1016/j.psyneuen.2023.106688>

When do the effects of a synergistic mindsets intervention persist? Testing the mindset + supportive context hypothesis

Cameron Hecht¹, Samuel D. Gosling¹, Christopher J. Bryan¹, Jeremy P. Jamieson², Jared S. Murray¹, David S. Yeager¹

¹ The University of Texas at Austin

² University of Rochester

We tested whether and under what conditions a synergistic mindsets intervention could mitigate threat responses to stressors. The intervention teaches individuals (1) the growth mindset—the belief that abilities are malleable—to help them understand stressful demands as opportunities for growth, and (2) the “stress-can-be-enhancing” mindset—the understanding that the physiological stress response (e.g., increased heart rate) is not always debilitating, but instead can be enhancing (e.g., by increasing the flow of oxygenated blood to the brain). This helps people to see the physiological symptoms that accompany stressors not as barriers to success, but instead as assets that can energize their pursuit of valued goals. The intervention helped undergraduates' ($n = 360$) to reappraise a Trier Social Stress Test as a positive challenge rather than a negative threat and reduced their total peripheral resistance during the task (a measure of vasoconstriction in the body's periphery and indicator of a threat-type response). Subsequently, in a longitudinal field-experiment in an introductory college psychology course ($n = 1,675$), we found that intervention effects on students' challenge-type appraisals of course stressors were more positive and more sustained over the course of the semester when instructors provided consistent messages that supported and reinforced the intervention message. This study sheds light on the contextual factors that can help to maintain the effects of the synergistic mindsets intervention over time.

<https://doi.org/10.1016/j.psyneuen.2023.106689>

Sex Matters: Understanding the Influence of Stress Mindset and Cortisol Reactivity on Decision-Making

Félix Duplessis-Marcotte, Marie-France Marin

Université du Québec à Montréal, Canada

Important decisions are often made under stress. The mindset adopted vis-à-vis the enhancing or the debilitating effects of stress can modulate the outcome of the stress response. Sex is an important factor modulating stress response and decision-making. Yet, whether sex differences moderate the interplay between stress mindset and the stress response (via cortisol reactivity) on decision-making has not been investigated. This is of importance given that men typically engage in greater risk-taking under stress. Forty healthy young adults (20 women) completed the Stress Mindset Measure before